OIPE IAP44
JUL 03 2007
PATENT & TRADEMARK OFFICE

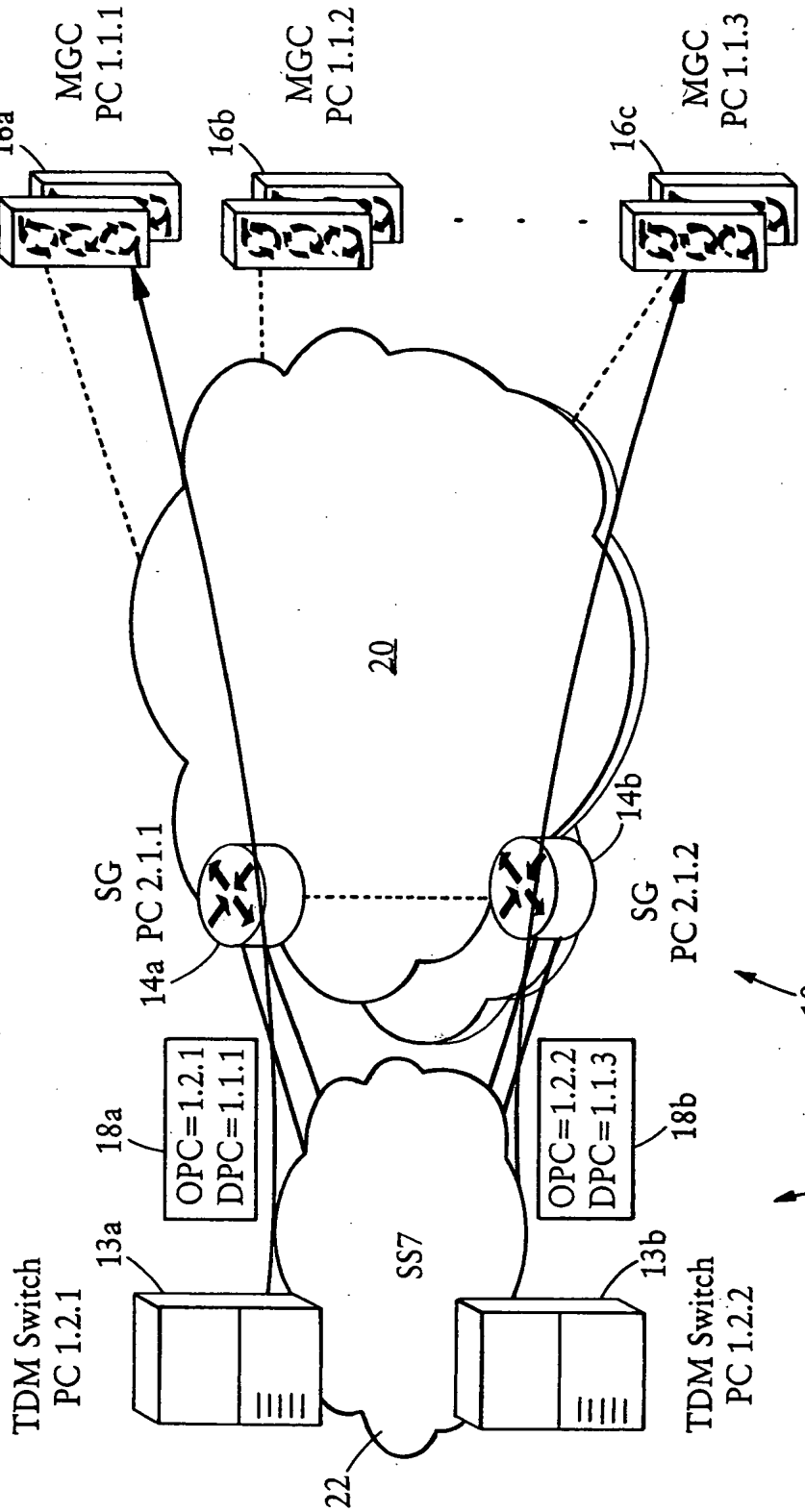

Figure 1
(PRIOR ART)

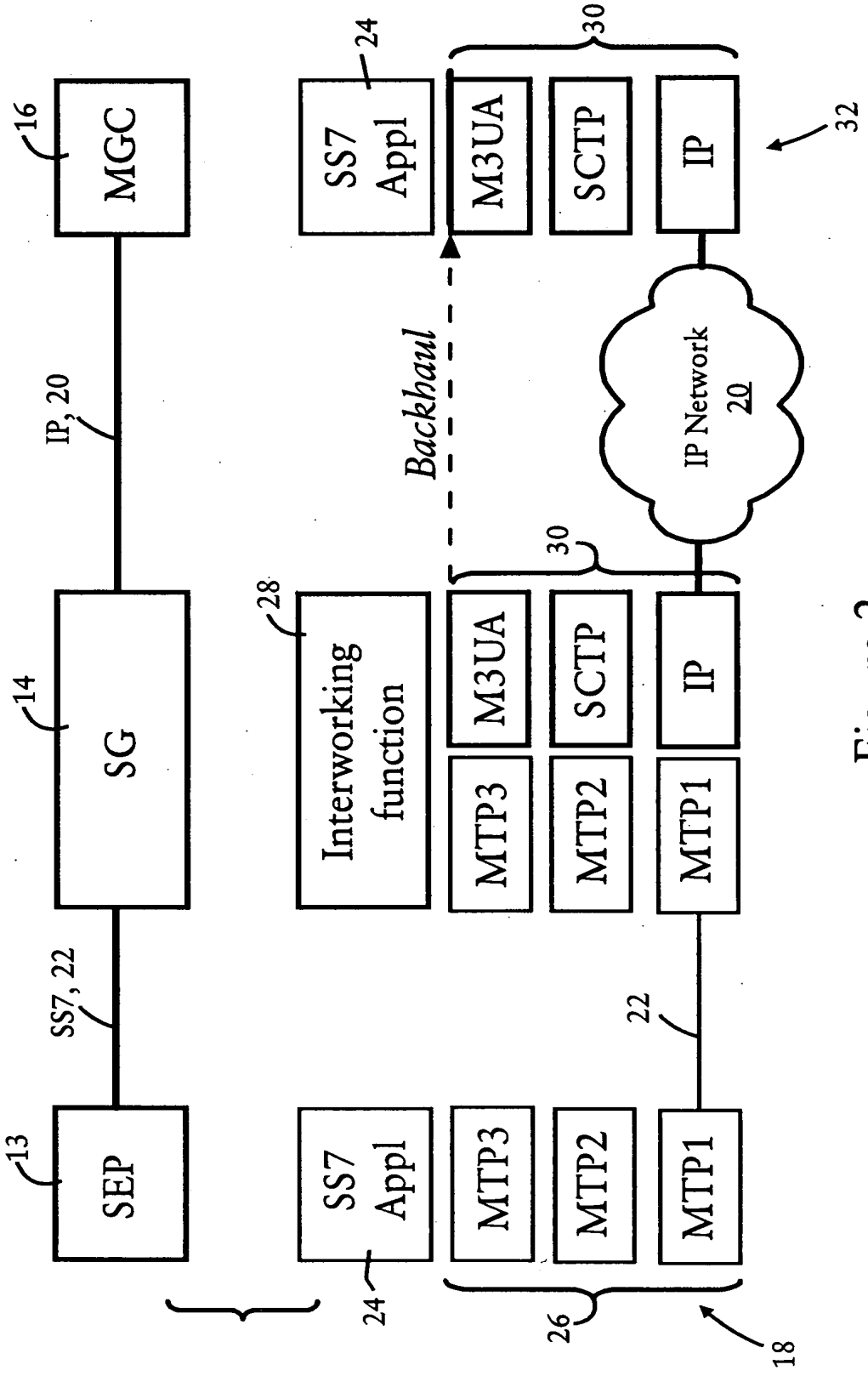

Figure 2
(PRIOR ART)

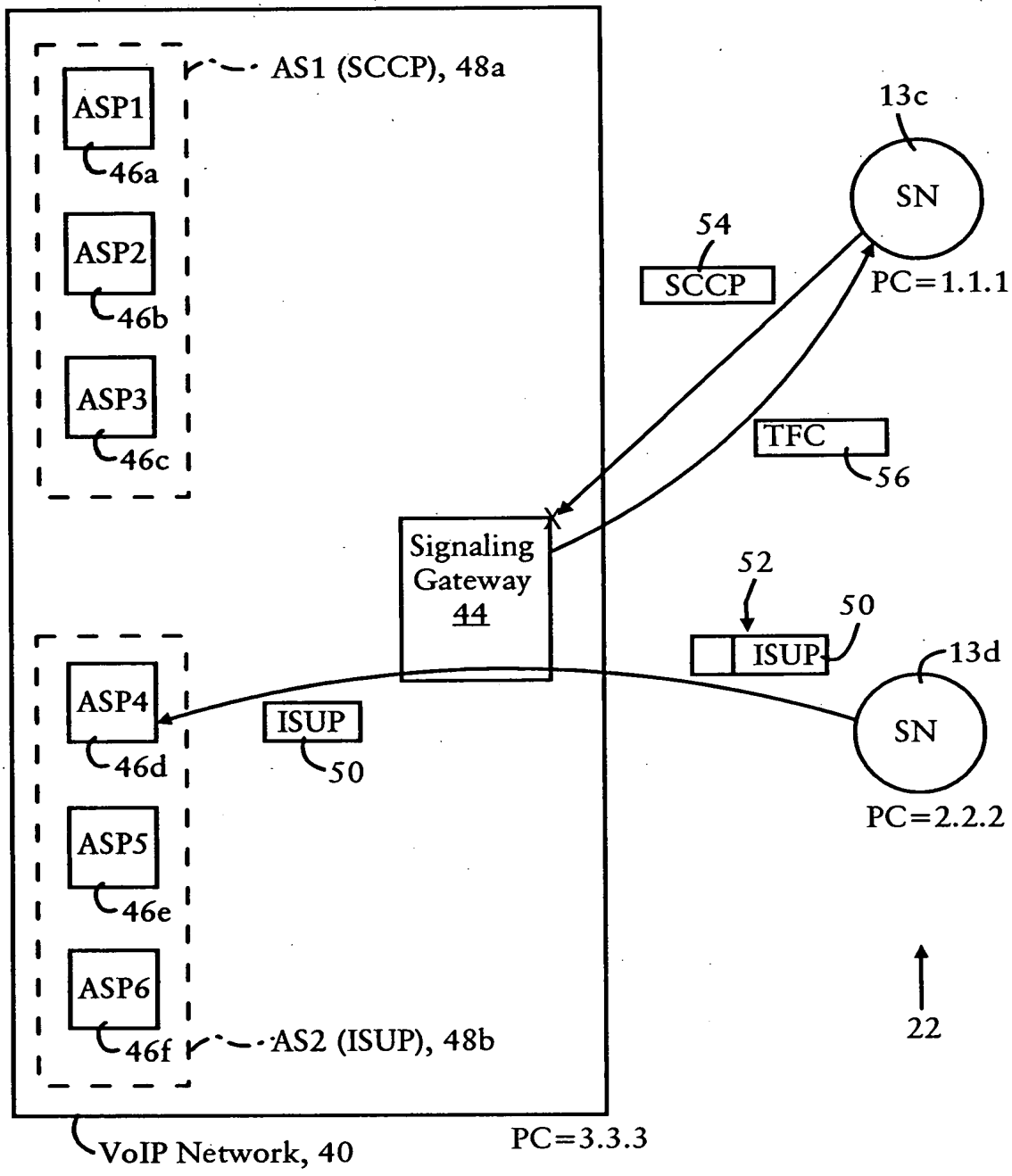
AS1 (SCCP), 48a
ASP1
46a
ASP2
46b
ASP3
46c
13c
SN
54
SCCP
PC=1.1.1
TFC
56
Signaling Gateway 44
52
50
ISUP
13d
SN
PC=2.2.2
ASP4
46d
ISUP
50
ASP5
46e
ASP6
46f
AS2 (ISUP), 48b
22
VoIP Network, 40
PC=3.3.3

Figure 3

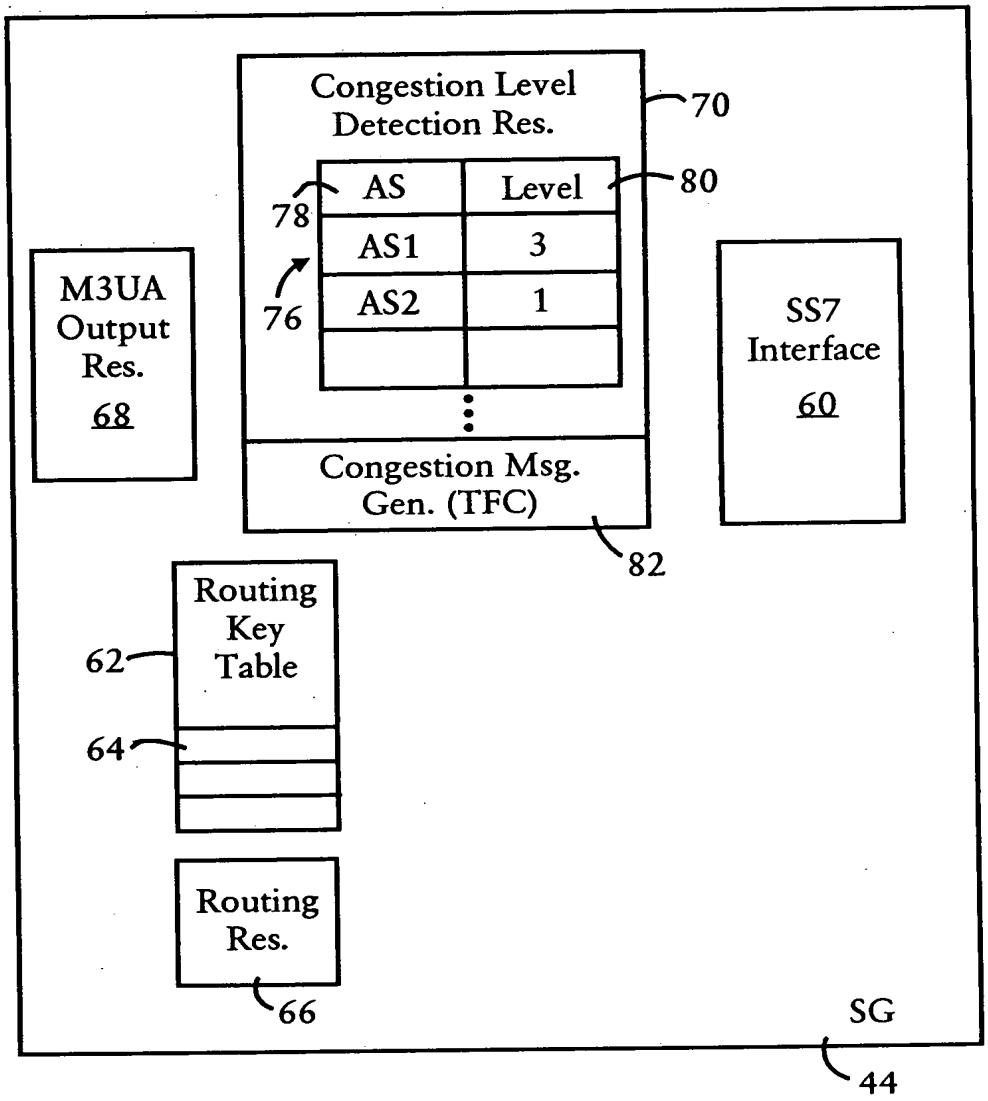
Congestion Level Detection Res.
70
AS
Level
80
78
AS1
3
76
AS2
1
M3UA Output Res.
68
SS7 Interface
60
Congestion Msg. Gen. (TFC)
82
Routing Key Table
62
64
Routing Res.
66
SG
44

Figure 4

	Traffic Configuration	Determine AS Cong. Level By:	
72a	Override	Use Highest Cong. Level among Active ASPs	74a
72b	Loadshare	Use Lowest Cong. Level among Active ASPs	74b
72c	Broadcast	Use Lowest Cong. Level among Active ASPs	74b
72d	Loadshare Bindings	Use Highest Cong. Level among Active ASPs	74a

Figure 5

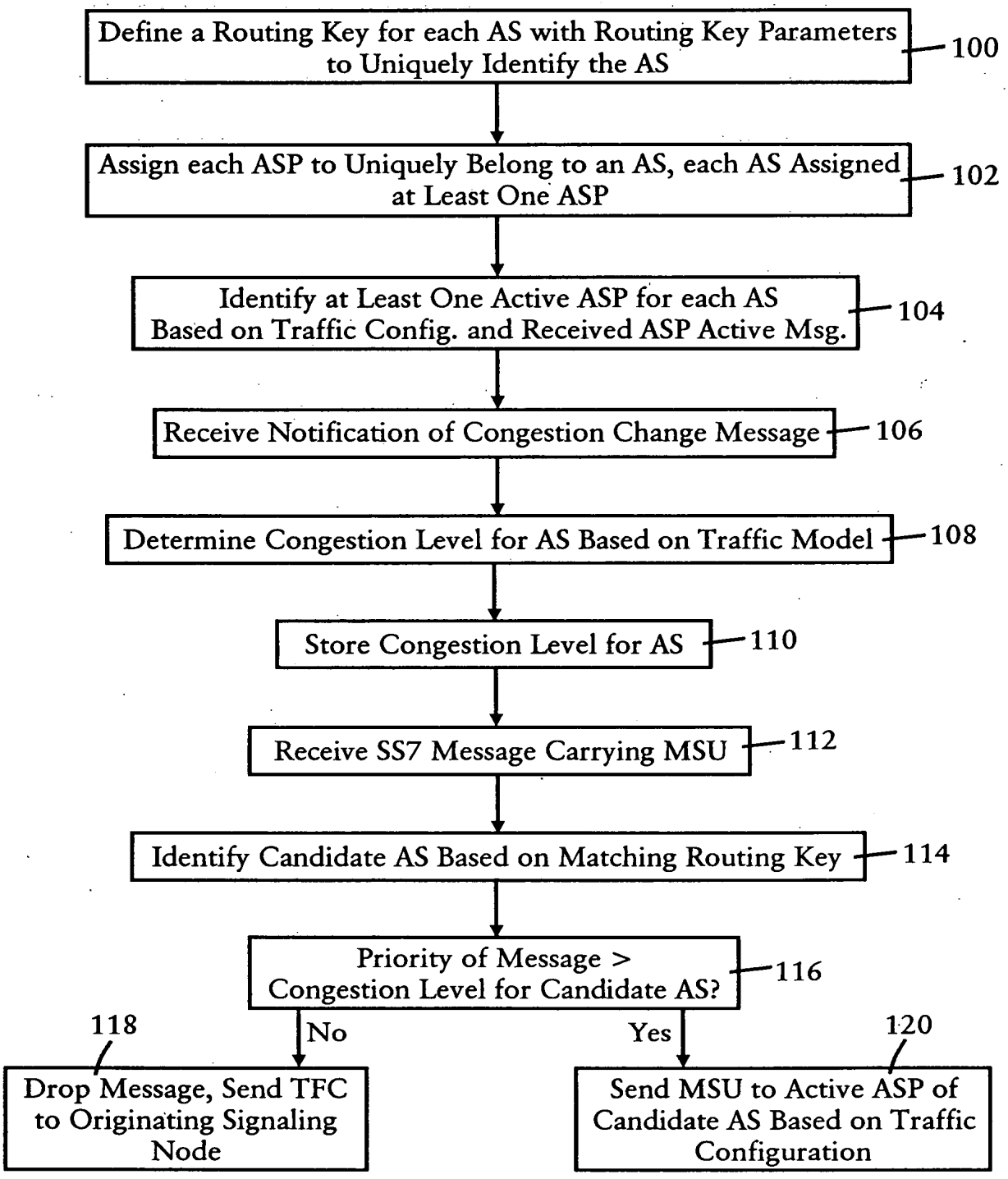
Define a Routing Key for each AS with Routing Key Parameters to Uniquely Identify the AS
100
Assign each ASP to Uniquely Belong to an AS, each AS Assigned at Least One ASP
102
Identify at Least One Active ASP for each AS Based on Traffic Config. and Received ASP Active Msg.
104
Receive Notification of Congestion Change Message
106
Determine Congestion Level for AS Based on Traffic Model
108
Store Congestion Level for AS
110
Receive SS7 Message Carrying MSU
112
Identify Candidate AS Based on Matching Routing Key
114
Priority of Message > Congestion Level for Candidate AS?
116
No
Yes
118
Drop Message, Send TFC to Originating Signaling Node
120
Send MSU to Active ASP of Candidate AS Based on Traffic Configuration

Figure 6